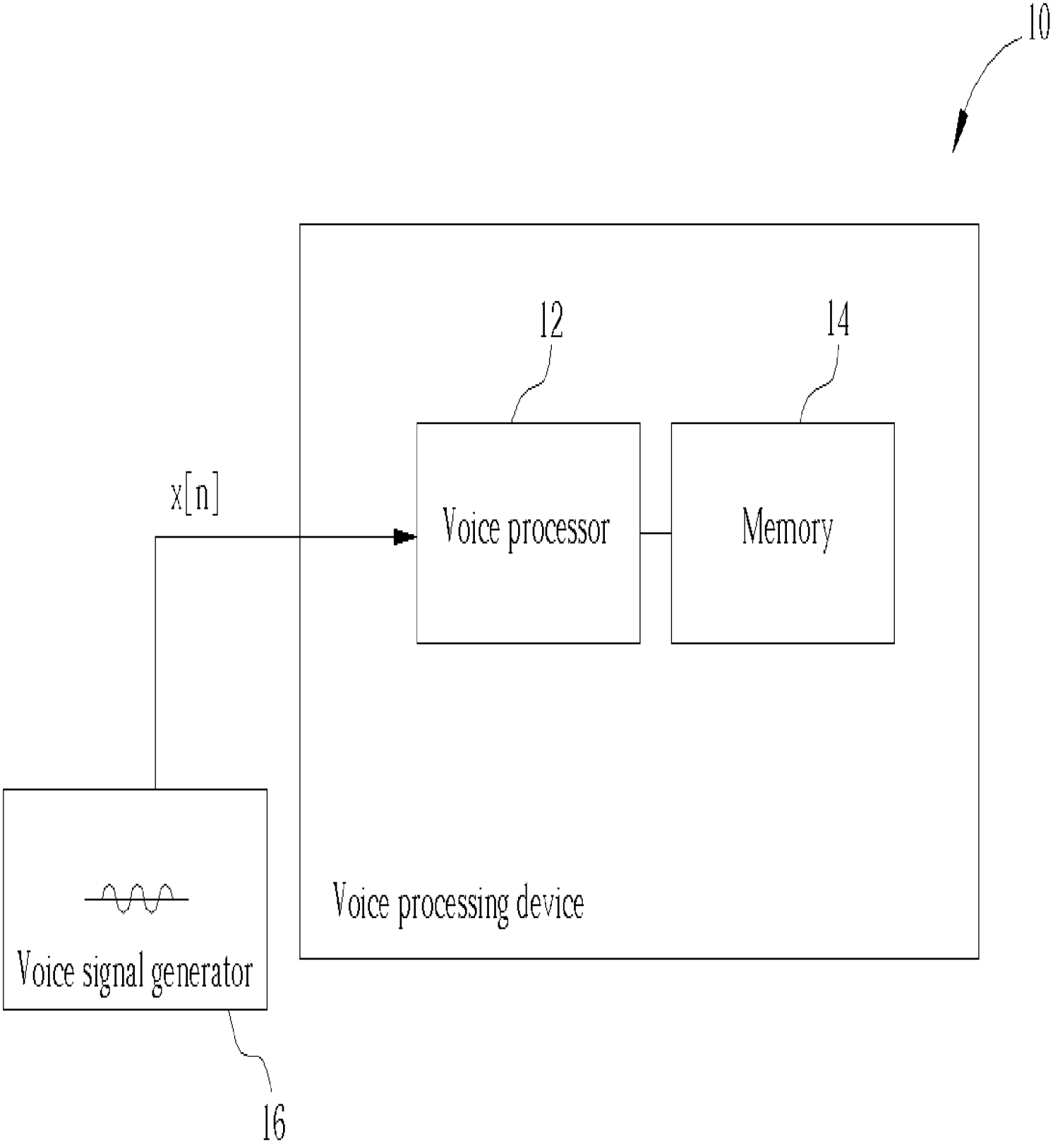
10
12
14
x[n]
Voice processor
Memory
Voice processing device
Voice signal generator
16

Fig. 1

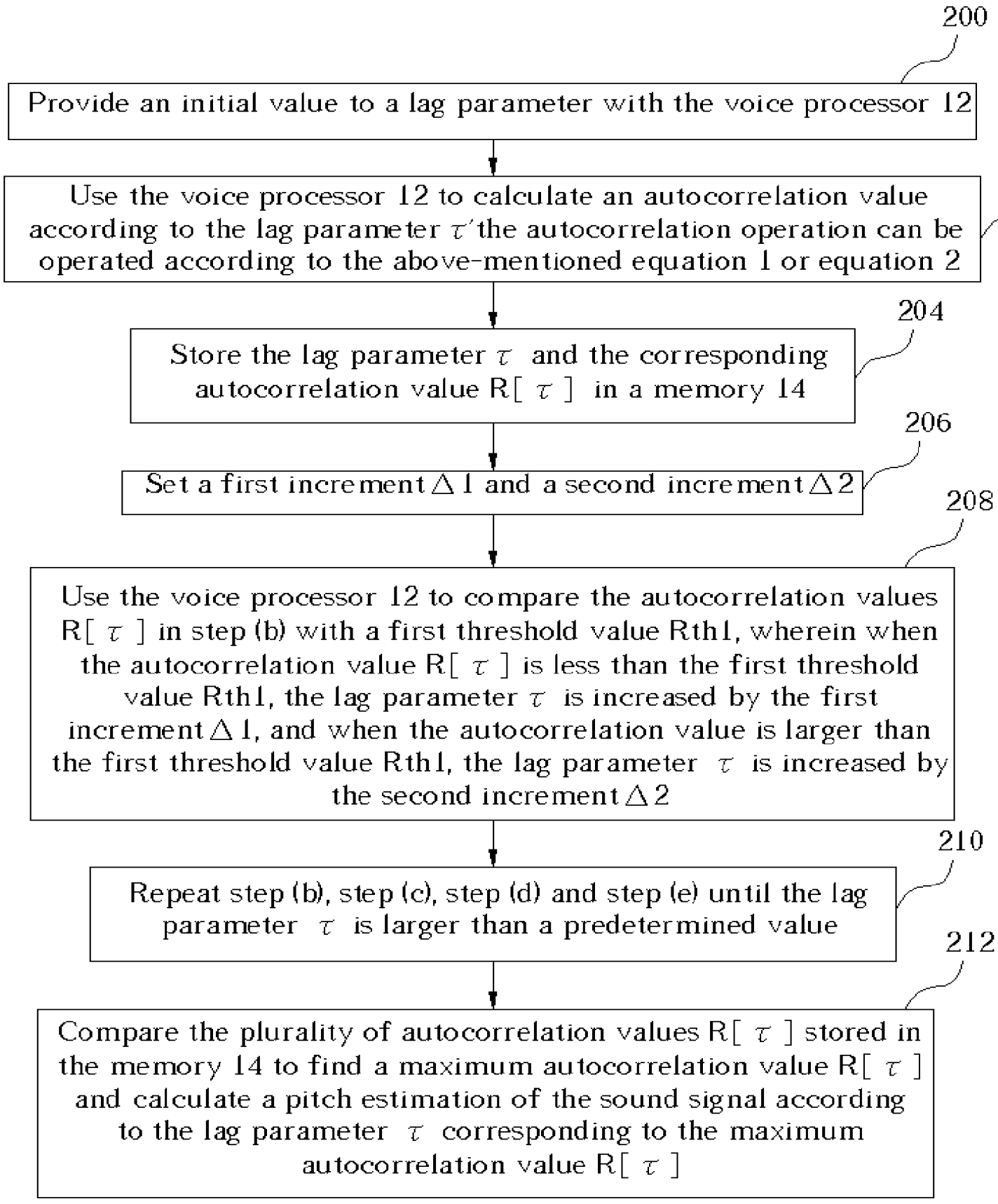
200
Provide an initial value to a lag parameter with the voice processor 12
202
Use the voice processor 12 to calculate an autocorrelation value according to the lag parameter τ′the autocorrelation operation can be operated according to the above-mentioned equation 1 or equation 2
204
Store the lag parameter τ and the corresponding autocorrelation value R[τ] in a memory 14
206
Set a first increment Δ1 and a second increment Δ2
208
Use the voice processor 12 to compare the autocorrelation values R[τ] in step (b) with a first threshold value Rth1, wherein when the autocorrelation value R[τ] is less than the first threshold value Rth1, the lag parameter τ is increased by the first increment Δ1, and when the autocorrelation value is larger than the first threshold value Rth1, the lag parameter τ is increased by the second increment Δ2
210
Repeat step (b), step (c), step (d) and step (e) until the lag parameter τ is larger than a predetermined value
212
Compare the plurality of autocorrelation values R[τ] stored in the memory 14 to find a maximum autocorrelation value R[τ] and calculate a pitch estimation of the sound signal according to the lag parameter τ corresponding to the maximum autocorrelation value R[τ]

Fig. 2

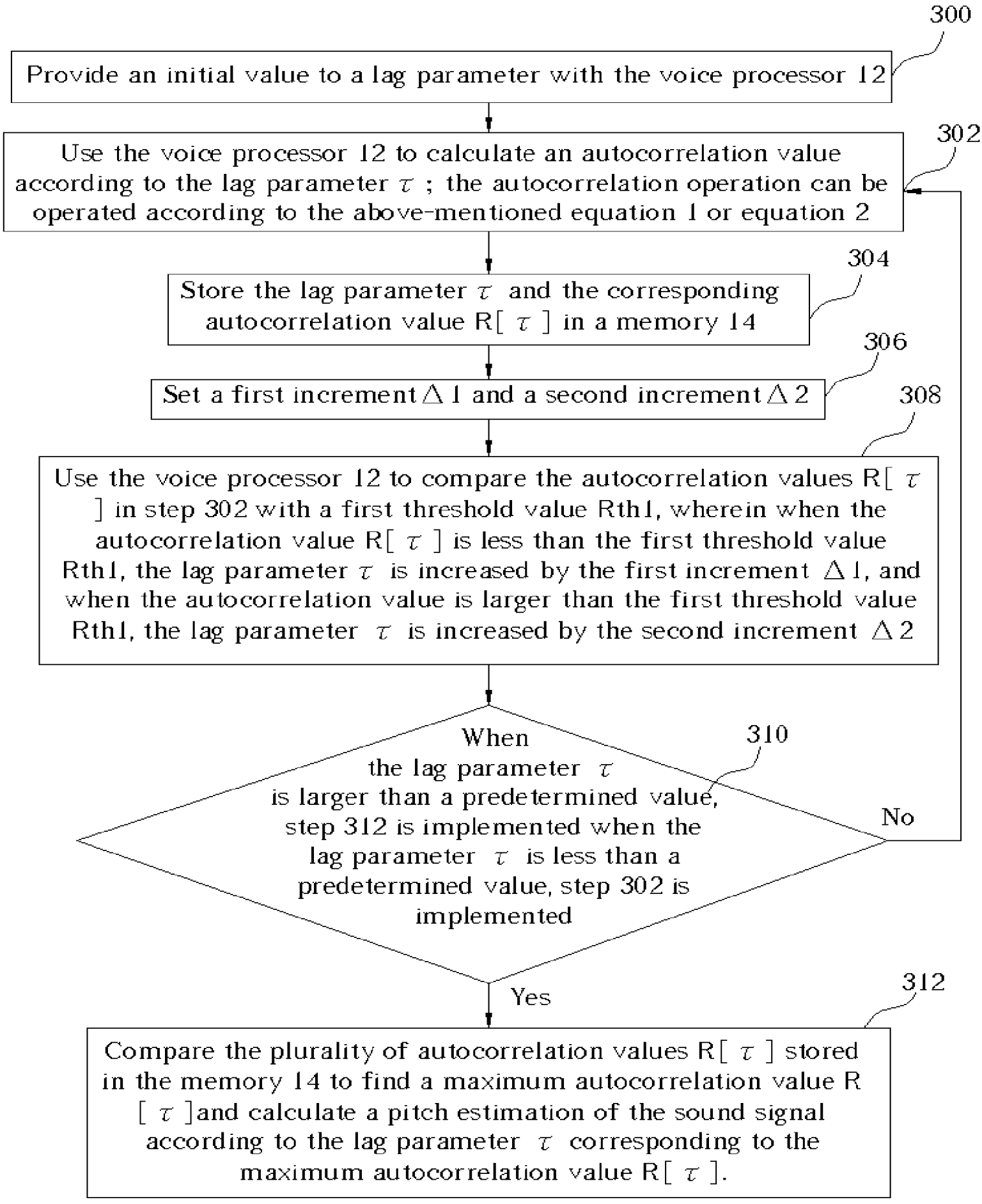
300
Provide an initial value to a lag parameter with the voice processor 12
302
Use the voice processor 12 to calculate an autocorrelation value according to the lag parameter τ ; the autocorrelation operation can be operated according to the above-mentioned equation 1 or equation 2
304
Store the lag parameter τ and the corresponding autocorrelation value R[τ] in a memory 14
306
Set a first increment Δ1 and a second increment Δ2
308
Use the voice processor 12 to compare the autocorrelation values R[τ] in step 302 with a first threshold value Rth1, wherein when the autocorrelation value R[τ] is less than the first threshold value Rth1, the lag parameter τ is increased by the first increment Δ1, and when the autocorrelation value is larger than the first threshold value Rth1, the lag parameter τ is increased by the second increment Δ2
310
When the lag parameter τ is larger than a predetermined value, step 312 is implemented when the lag parameter τ is less than a predetermined value, step 302 is implemented
No
Yes
312
Compare the plurality of autocorrelation values R[τ] stored in the memory 14 to find a maximum autocorrelation value R[τ]and calculate a pitch estimation of the sound signal according to the lag parameter τ corresponding to the maximum autocorrelation value R[τ].

Fig. 3